

THREE SPECIES OF THE GENUS COSCINIDA FROM CHINA (ARANEAE, THERIDIIDAE)

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Abstract This paper deals with three spiders of the genus *Coscinida* from China, including two new species: *C. hunanensis* sp. nov., and *C. shimenensis* sp. nov. New species are diagnosed.

Key words Araneae, Theridiidae, *Coscinida*, new species.

Introduction

The genus *Coscinida* includes a world fauna of thirteen species of these, only one recorded from China (Zhu & Zhang, 1992; Zhu, 1998). Seven from the remaining parts of Palaearctic and Oriental Regions, i. e. one from Japan (Yoshida, 1994, 2003), two from Korea (Paik, 1995), three from Sri Lanka, Java (Simon, 1895, 1904); one from Indonesia, Sumatra (Simon, 1899) and five from Ethiopian Region. i. e. one from Congola (Miller, 1970), two from Angola (Locket, 1968), one from Tanzania (Tullgren, 1910) and the type species, *Coscinida tibialis* Simon, 1895 from Africa and Israel.

When we study the Hunan fauna, two new species was founded which are given in the present paper. Type specimens are deposited in College of Life Sciences, Hunan Normal University. All the measurements given are in millimeter (mm).

Abbreviations used. AER= anterior eye row, AH = abdomen height, AL= abdomen length, AW = abdomen width, AME= anterior median eye, ALE= anterior lateral eye, AME-AME = interval between AMEs, AME-ALE= interval between AME and ALE, CH= Clypeus height, CL= carapace length, CW= carapace width, MOQL= median ocular quadrate length, MOQAW= median ocular quadrate width of the anterior, MOQPW = median ocular quadrate width of the posterior, PER= posterior eye row, PME = posterior median eye, PLE= posterior lateral eye, PME-PME = interval between PMEs, PME- PLE = interval between PME and PLE, TL = total length.

Genus *Coscinida* Simon, 1894

Coscinida Simon, 1894: 529. (Type species: *C. tibialis*, 1895); - Simon, 1899: 82; 1904: 68; Petrunkewich, 1928: 119; Roewer,

1942: 447; Bonnet, 1956 II (2): 1239; Levi & Levi, 1962: 19, 34, 48, figs. 139, 149; Levy, 1985: 110; Brignoli, 1983: 398; Platnick, 1987: 193, 1993: 197; Miller, 1970: 149, pl. XLVI, figs. 1-7; 146, pl. XLIV figs. 1-5 pl. XLV, figs. 1-6, Locket, 1968: 135, f. 54A-F; Yoshida, 1994: 28, figs. 1-7, 2003: 61, f. 14, 137-141, 529, 537; Paik, 1995: 15, f. 1-24; Zhu & Zhang, 1992: 24, fig. 5; Zhu, 1998: 32, f. 14A-E.

Loxonychia Tullgren, 1910, 3: 125 (Type species: *L. lugubris* Tullgren, 1910); Petrunkewitch, 1928: 119; Roewer, 1942: 456; Bonnet, 1957, II (3): 2574; Levi & Levi, 1962: 19, 23, 49.

Thelididla Tullgren, 1910, 3: 126 (Type species: *T. monticola* Tullgren, 1910); Roewer, 1942: 459; Bonnet, 1959, II (3): 4429; Levi & Levi, 1962: 19, 30, 49.

Thelididla monticola Tullgren, 1910 = *Coscinida lugubris* (Tullgren, 1910)

Diagnostic character. Small theridiids, TL 2.00-3.00. Carapace low, longer than wide. Eye area black, AER recurved, PER slightly recurved. Eight eyes relatively large and closely arranged, PME separated by their diameter or less, closer to laterals than to each other. ALE & PLE almost touching. Sternum posteriorly round. Chelicera weak with a small mesal anterior boss, no retromarginal tooth. Leg IV or I longest, leg III shortest. Abdomen ovoid, often grey or grey black, scattered with white spots or patches, colubus absent.

Genital palpus with a pointed hook on anterior mesal or distal margin, embolus on ventral side of genital bulb, in left palpus embolus curving clockwise. Epigynum having an narrow splitting atrium.

Genus *Coscinida* can be separated from the other theridiid genera by: having relatively large eyes which arrange closely; abdomen flatter, legs thicker; the pointed hook on male palpus. This genus is similar to Genus *Stemmopes*, but can be separated from the latter by lacking colulus.

Coscinida asiatica Zhu et Zhang, 1992 (Figs. 1-5)

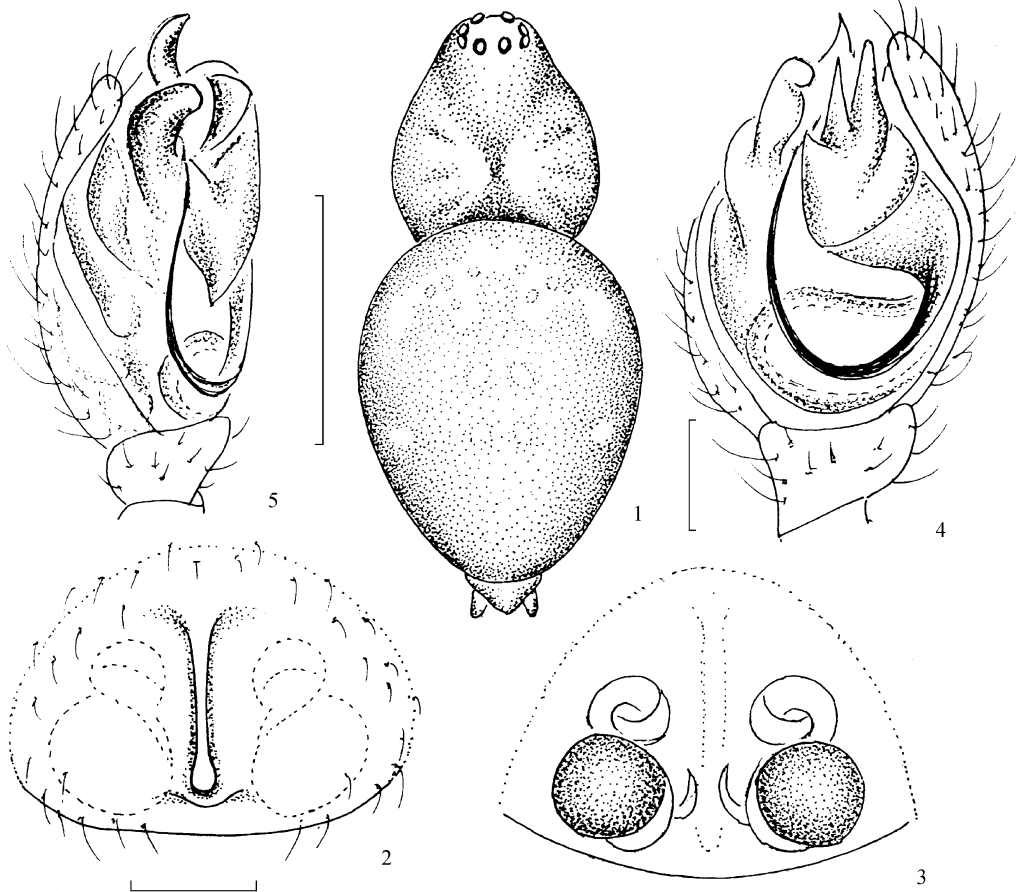
Coscinida asiatica Zhu & Zhang 1992: 24-26, fig. 5; Zhu, 1998: 32, fig. 14.

Material examined. 7 ♀♀, 3 ♂♂, Suining County (26°24' N, 110°12' E), Hunan Province, Aug. 1984, leg. WANG Jia-Fu; 1 ♀, 1 ♂, citrus plantation, Xinning County (26°24' N, 110°48' E), Hunan Province, 1990, leg. YAN Heng-Mei.

Measurements TL 1.90-2.30 (♀) / 1.80-2.10 (♂). Specimens measured in 2.30 (♀) / 1.80 (♂). CL 0.80/0.80, CW 0.88/0.62; AL 1.50/1.00, AW 1.10/0.63.

Description Female. Carapace yellow, dark brown laterally, the anterior margin of cephalic region slight protruded, cervicle groove distinct, radial grooves rather obscure. AER recurved, PER almost

straight. AME smallest, PME largest, ALE and PLE equal, no touching each other. $AME:AME < AME:ALE$, $PME:PME < PME:PLE$. MOQL large than wide, $MOQAW < MOQPW$. Sternum grey brown, black laterally. Chelicerae grey black with distal end yellow, endites and labium yellow brown. Legs yellow, distal ends of femoral III and IV, ventral patellae and tibiae black brown. Leg formula IV, I, II, III. Abdomen ovoid, posterior end tapering, dorsum black brown, near the anterior margin a large butterfly-like pale marking present, several white spots scattered on middle section, having an transverse bend which consisting of several white spots, before and behind this bend having paired white spots. Abdominal venter grey yellow brown. Spinnerets grey black.



Figs. 1-5. *Coscinida asiatica*. 1. Body (♀) dorsal, legs removed. 2. Epigynum. 3. Vulva, 4. Genital palpus. 5. Prolateral. Scales: 1 = 1.0 mm; 2-5 = 0.1 mm.

Epigynum with a slitting groove-like atrium black brown. Spermathecae spherical, copulatory duct jointed with spermatheca at the anterior-inner side, coiling from dorsal side to the ventral, expended blackwards near the epigastric groove, opening into the atrium.

Male. Carapace protruded forwards more acuter

than that of the female, the eyes arrangement, leg formula and the pattern of abdominal dorsum are similar to the female.

Palpal organ. The distal margin with a smaller pointed hook. Embolus initiated from ventral side of genital bulb curving clockwise (left palpus).

Most of the spiders always live on the ridge of

rice field and in the orchard, near the grass roots, few of them can be found on trees.

Diagnosis. This species can be separated from the allied species by: the pattern on the abdominal dorsum; the epigynum having a median longitudinal furrowlike depression, spermatheca spherical, jointed with the copulatory duct at the inner side anterior laterally; the copulatory duct twisting a circular than backward opened near epigastric groove; the embolic base stout, needle tube slender, in ventral view, extending clockwise (left palpus); conductor with a lateral spinous process.

Distribution. China (Hunan Province).

Coscinida hunanensis sp. nov. (Figs. 6-9)

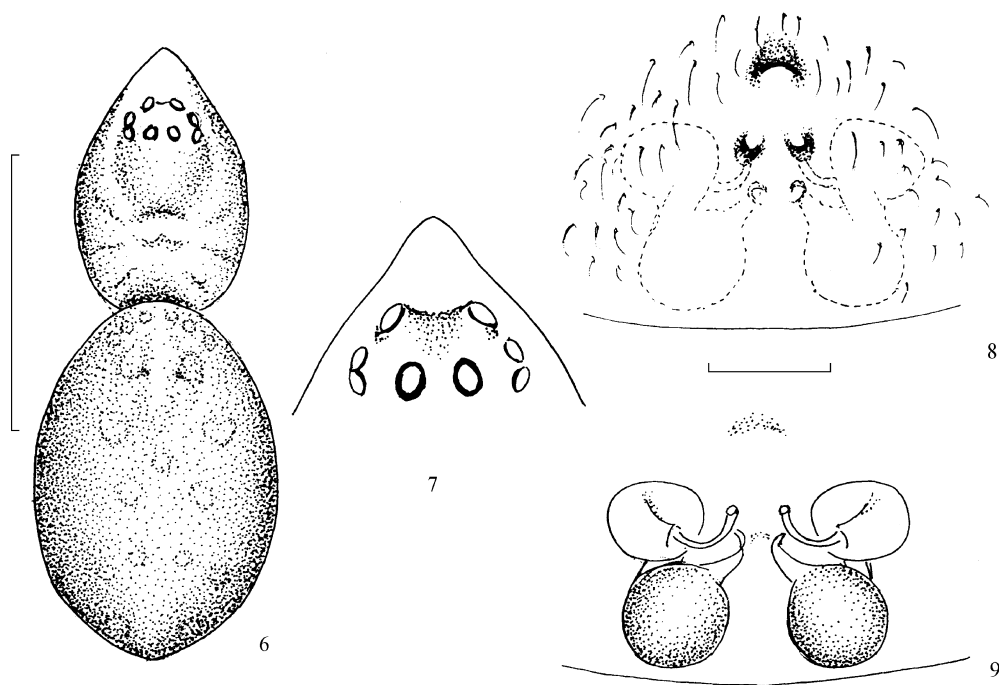
Type material. Holotype ♀, Daoxian County (25° 30' N, 111° 36' E), Hunan Province, 30 Sept. 1992, leg. GONG Liar Su. G92-058.

Measurements. Female TL 2.30, CL 0.98, CW 0.72; AL 1.35, AW 1.10. AME 0.07, ALE 0.06, AME-AME 0.105, AME-ALE 0.04; PME 0.06, PLE 0.05. PME-PME 0.05, PME-PL 0.07. MOQL 0.20, MOQAW 0.25, MOQPW 0.18, CH 0.24. Measurements of legs are in Table 1.

Table 1.

	Total	Fem	Pat + Tib	Metat	Tar
Leg I	2.50	0.80	0.80	0.55	0.35
Leg II	2.15	0.55	0.70	0.55	0.35
Leg III	2.10	0.55	0.70	0.50	0.35
Leg IV	3.25	0.90	1.20	0.70	0.45

Description. Carapace yellow brown, lateral margins, fovea, cervicle and radial grooves grey brown. Behind each cervical, radial grooves, a transverse yellow stria presents. From dorsal view, AER recurved, PER straight, ALE and PLE almost touching. Sternum shieldlike, anterior margin truncate, posterior end round, partly inserted between two IV coxae. Yellow brown, covered with sparse brown setae. Chelicerae and endites yellow brown, endites rectangular, obliques inwards. Labium brown, wider than long. Palpa brown, tibiae and tarsi spindle shaped. Legs yellow brown no distinct annuli, leg formula IV, I, II, III, the second and third legs almost equal in length. Abdomen elongated ovoid, dorsum alternated with thin grey and brown markings, covered with moderate brown setae. Abdomenal venter pale yellow brown, 1-2 yellow longitudinally thin brown stria on the lateral. Spinnerets yellow brown.



Figs. 6-9. *Coscinida hunanensis* sp. nov. 6. Body (♀) dorsal, legs removed. 7. Eyes. 8. Epigynum. 9. Vulva. Scales: 6 = 1.0 mm, 7-9 = 0.1 mm.

Epigynum anterior-measal having a sclerotized shallow hood. Atrium longitudinally slited, spermathecae spherical and relatively large. A section

of copulatory ducts which is thicker and located in front of the spermatheca rotated one circle to form a disklike structure, the remaining section thinner

opens behind the hood.

Diagnosis. This new species is similar to *Coscinida asiatica* Zhu et Zhang, 1992, but can be distinguished by the different patterns on the abdominal dorsum; the longitudinal atrial slit with an anteriorly hood and broader than that of the latter; the spermathecal ducts before each spermatheca rotated one circle to form a disk-like structure.

Etymology. This specific name is derived from the type locality—Hunan Province.

Distribution. China (Hunan Province).

Coscinida shimenensis **sp. nov.** (Figs. 10-13)

Type material. Holotype ♀, Shimen County (29°36' N, 111°24' E), Hunan Province, July–Aug. period, 1975, leg. YIN Chang-Min.

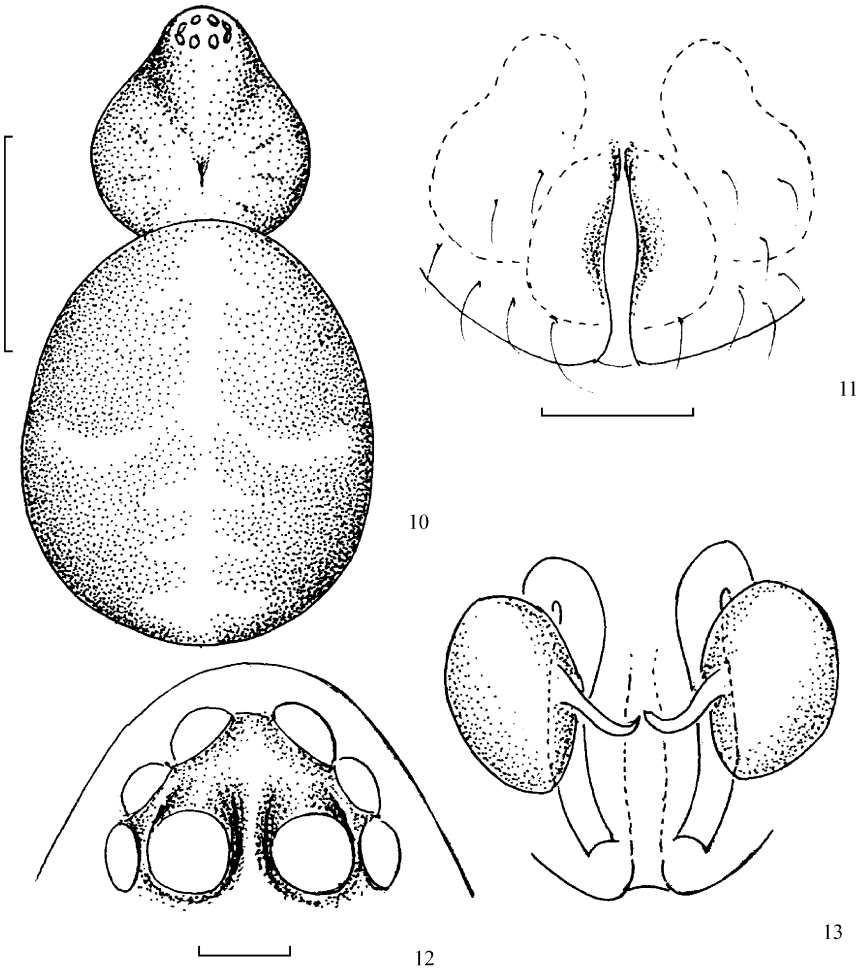
Measurements. Female TL 2.45. CL 0.95, CW 0.86; AL 1.50, AW 1.30, AH 1.30. AME= ALE= PLE 0.08, PME 0.10, AME–AME 0.05, AME–ALE

0.02; PME–PME 0.025, PME–PLE 0.01, MOQL= AOQAW 0.22, MOQPW 0.25. Measurements of legs as in Table 2.

Table 2.

	Total	Fem	Pat + Tib	Metat	Tar
Leg I	3.45	0.90	1.00	0.95	0.60
Leg II	2.90	0.85	0.90	0.60	0.55
Leg III	2.50	0.90	0.70	0.50	0.40
Leg IV	3.75	1.25	1.20	0.80	0.50

Description. Carapace pear-shaped, grey black brown, grey black in margin. Eye area elevated. Fovea black brown, longitudinally, both ends with small branchlets, 3 anteriorly, 2 posteriorly. Cervical and radial grooves indistinct. Anterior eye row strong recurved, posterior eye row almost straight. ALE and PLE closed to each other, each eye base with black ring. Sternum grey brown, its margin grey black, with indistinct radial striae, posterior end round. Chelicerae, endites, palpa, labium and legs all grey



Figs 10-13. *Coscinida shimenensis* sp. nov. 10. Body (♀), dorsal, legs removed. 11. Eyes. 12. epigynum. 13. Vulva. Scales: 10 = 1.0 mm, 11-13= 0.1 mm.

brown. Chelicerae weak, without marginal tooth, endites obliques inwards, legs thicker without annulus. Leg formula IV, I, II, III Abdomen ovoid, grey black, along dorsum axis having several paler obscure, transversy markings, the fifth the broadest. Abdomenal venter light grey brown. Spinnerets grey brown. Without colulus, but having two setae on its situation.

Epigynum grey black, on central axis there is a splitting atrium. Spermathecae elongated ovoid, copulatory ducts long and thick, connected with spermathecae anteriorly, curved inwards to the ventral side of spermathecae, opening at the posterior margin of atrium bilaterally.

Male unknown.

Diagnosis. The leg formula and structure of epigynum are similar to that of *Coscinida asiatica* Zhu et Zhang, 1992, but can be separated by: the different detail structure of vulvae, the copulatory ducts of this new species are longer and thicker than that of the latter.

Etymology. The specific name is derived from the

type locality—Shimen County.

Distribution. China (Hunan Province).

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中国格蛛属三种蜘蛛的描述 (蜘蛛目, 球蛛科)

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摘要 描述了3种中国格蛛, 其中有两新种: 亚洲格蛛 *Coscinida asiatica* Zhu et Zhang, 1992; 湖南格蛛 *Coscinida hunanensis* sp. nov.; 石门格蛛 *Coscinida shimenensis* sp. nov.。

关键词 蜘蛛目, 球蛛科, 格蛛属, 新种.

中图分类号 Q959.226

文中记述了3种蜘蛛的分类学特征, 并附有详尽的鉴别特征图。